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(54) Cosmetic compositions for  
conditioning the hair or the skin

(57) The cosmetic composition  
consists of two separate liquid phases,  
the first phase being an oily phase and  
the second phase being an aqueous  
phase containing at least one cationic  
polymer in the dissolved state.

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## SPECIFICATION

Cosmetic compositions for conditioning the hair or the skin, and their application

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The present invention relates to cosmetic compositions for conditioning the hair or the skin, and their application.

Oils and mixtures of oils have always been used for conditioning the hair, in particular dry or sensitised hair, that is to say hair which has been degraded by exposure to inclement environments (sun, sea water and the like) or also by treatments such as perming, colouring and bleaching.

Similarly, oily cosmetic compositions have been used for conditioning the skin, that is to say for making dry, wrinkled or rough skin supple and soft to the touch.

When applied to the hair, after rinsing and/or shampooing, oils, despite their ease of application and impregnation, impart the desired properties, that is to say an appreciable softness to the touch, a glossy appearance and a protective effect against the environment, only to a small extent. Likewise, the use of a purely oily composition for the skin is not entirely satisfactory, in particular because of the difficulties of uniform spreading, the resulting greasy appearance and the "greasy" sensation which is unpleasant to the touch.

It is for this reason that the use of oil-based products has for some time been rather neglected in favour of other, more effective products for conditioning and protecting sensitised hair and the skin. These new products, which are used in modern cosmetic compositions, are especially polymers of the polyamine, polyaminoamide or poly-(quaternary ammonium) type, the amine or ammonium groups forming part of the polymer chain or being joined to the latter. Polymers of this type, and their use in cosmetic compositions, have been described in numerous publications, and cosmetology specialists have grouped all these polymers together in a class which is generally designated by the expression "cationic polymers". Although these cationic polymers can have varied effects, specialists have recognised that they all have the common property, albeit to various extents, of attaching themselves to the skin and the hair and of making the hair easier to comb out when wet.

However, attempts to incorporate cationic polymers into oils have not made it possible to produce effective cosmetic compositions. In certain cases, it has been impossible to incorporate the cationic polymers into the oils because the said polymers could not be isolated in the dry state and only existed in aqueous solution, or the polymers were not soluble in the oils. In other cases, it was possible to incorporate the polymer into the oils, but the effectiveness of the polymers was then very low because their ability to attach to the skin or the hair was inhibited in the oily medium.

A further possibility for combining the effects of oils and cationic polymers was first to apply an aqueous solution of cationic polymer and then to apply an oil. However, these attempts also failed

because either the amount of water (aqueous solution of cationic polymer) is too small and it is not possible to distribute it uniformly over the whole head of hair, or the amount of water is sufficient for an efficient distribution over the hair, but the oil is then distributed poorly over the hair when wet. Likewise, the oil is distributed poorly over the skin when wet.

It has now been discovered that it is possible to combine the cosmetic effects of oils and cationic polymers by virtue of a particular, non-detergent and non-foaming composition, which forms the subject of the present invention.

The present invention provides a cosmetic composition for conditioning the skin or the hair, characterised in that it consists of two separate liquid phases, the first phase being an oily phase and the second phase being an aqueous phase in which at least one cationic polymer is dissolved, and in that the said composition is free of detergents and foaming agents.

The oils which can be used in the compositions of the present invention are in general the oils which can be used in cosmetic products for the skin or for the hair.

These are especially vegetable oils, such as sweet-almond oil, groundnut oil, wheatgerm oil, linseed oil, jojoba oil, apricot stone oil, walnut oil, palm oil, pistachio nut oil, sesame oil, rapeseed oil, cade oil, maize germ oil, peach stone oil, poppy seed oil, pine oil, castor oil, soya oil, avocado oil, safflower oil, coconut oil, hazelnut oil, olive oil, grapeseed oil and sunflower seed oil.

The oily phase of the compositions of the invention can also contain animal oils, such as whale oil, lard oil, horsehoof oil, tuna oil, caballine oil, otter oil, egg oil, sheep oil, seal oil, turtle oil, halibut liver oil, marmot oil, cod liver oil, neat's-foot oil and tallow oil.

The oily phase can also contain a synthetic oil preferably consisting of carbon, hydrogen and oxygen, such as the glycol ethers or esters or glycerol ethers or esters described in French Patents No. 74/09,657, No. 75/24,656 and Nos. 75/24,657 and 75/24,658.

The oily phase can also contain a mineral oil, such as vaseline oil (liquid petrolatum).

Preferably, the oily phase is free of silicone oils.

In general, it is preferred to use a vegetable oil mixed, if appropriate, with an animal oil and/or a

mineral or synthetic oil as defined above.

In this preferred embodiment, the proportion of vegetable oil is generally from 25% to 100% by volume, relative to the total volume of the oily phase, any remainder consisting of one or more animal,

synthetic and/or mineral oils.

As indicated above, the cationic polymers which can be used in the cosmetic products for the hair constitute a class which is well known to cosmetology specialists. Cationic polymers of this type are polycationic products described, in particular, in the following French Patents and French Patent Applications: 2,077,143, 1,492,597, 2,162,025, 2,280,361, 2,252,840, 2,368,508, 1,583,363, 2,080,759, 2,190,406, 2,320,330, 2,270,846, 76/20,261, 2,336,434, 2,413,907 and 2,189,434, and in U.S. Patents 3,227,615,

2,961,347, 2,273,780, 2,375,853, 2,388,614, 2,454,547, 3,206,462, 2,261,002, 2,271,378, 3,874,870, 4,001,432, 3,929,990, 3,956,904, 4,005,193, 4,025,617, 4,025,627, 4,025,653, 4,026,945, 3,589,978, 4,031,307 and 4,027,020.

The cationic polymers used in the composition of the invention are thus generally polymers of the polyamine, polyaminoamide or poly-(quaternary ammonium) type, the amine or ammonium group forming part of the polymer chain or being joined to the latter.

Polymers of this type which can be used according to the invention are especially:

1. vinylpyrrolidone/aminoalcohol acrylate or methacrylate copolymers (quaternised or unquaternised), such as those sold under the name Gafquat by the Gaf Corp., such as "copolymer 845" and "Gafquat 734 or 755", described in greater detail, in particular, in French Patent 2,077,143;

2. cellulose ether derivatives containing quaternary ammonium groups, such as those described in French Patent 1,492,597 and especially the polymers sold under the name JR, such as JR 125, JR 400 and JR 30 M, and under the name LR, such as LR 400 and LR 30 M, by the Union Carbide Corp., and cationic cellulose derivatives, such as CELQUAT L 200 and CELQUAT L 60 and H 100 sold by National Starch;

3. cationic polysaccharides, such as those described in U.S. Patents 3,589,978 and 4,031,307, and in particular Jaguar C 13 S sold by MEYHALL and CELANESE;

4. cationic polymers chosen from:

a) polymers containing units of the formula:

$-A-Z-A-Z-$ , in which A denotes a radical containing

two terminal amino groups, preferably  $-N \text{---} \text{---} N-$  and

Z denotes the symbol B or B'; B and B', which are identical or different, denote a divalent radical which is a straight or branched-chain alkylene radical

which contains up to 7 carbon atoms in the main chain, which is unsubstituted or substituted by one or more hydroxyl groups and which can also contain chain oxygen, nitrogen or sulphur atoms and 1 to 3 aromatic and/or heterocyclic rings, the oxygen, nitrogen and sulphur atoms being present in the form of an ether or thioether, sulfoxide, sulphone, sulphonium, amine, alkylamine, alkenylamine, benzylamine, amine oxide, quaternary ammonium, amide, imide, alcohol, ester and/or urethane group; these polymers and the process for their preparation are described in French Patent 2,162,025;

b) polymers containing units of the formula:

$-A-Z_1-A-Z_2-$ , in which A denotes a radical contain-

ing two terminal amine groups, preferably  $-N \text{---} \text{---} N-$ ,

and Z<sub>1</sub> denotes the symbol B, or B', being the symbol B', at least once; B<sub>1</sub> denotes a divalent radical which is a straight- or branched-chain alkylene or hydroxyalkylene radical having up to 7 carbon atoms

in the main chain, and B', is a divalent radical which is a straight- or branched-chain alkylene radical which has up to 7 carbon atoms in the main chain, which is the unsubstituted or substituted by one or more hydroxyl radicals and which is interrupted by one or more nitrogen atoms, the nitrogen atom

being optionally substituted by an alkyl chain which has from 1 to 4, and preferably 4, carbon atoms, which is optionally interrupted by an oxygen atom and which optionally contains one or more hydroxyl groups; these polymers and the process for their preparation are described in French Patent 2,280,361; and

c) the quaternary ammonium salts and the oxidation products of the polymers of the formulae indicated above under a) and b);

5. optionally alkylated, crosslinked polyaminoamides chosen from at least one water-soluble crosslinked polymer obtained by crosslinking a polyamino - polyamide (A) prepared by the polycondensation of an acid compound with a polyamine, the acid compound being chosen from: (i) organic dicarboxylic acids, (ii) aliphatic monocarboxylic and dicarboxylic acids with an ethylenic double bond, (iii) the esters of the abovementioned acids, preferably the esters with lower alkanols having from 1 to 6 carbon atoms, and (iv) mixtures of these compounds. The polyamine is chosen from amongst bis-primary and mono- or di-secondary polyalkylene - polyamines. Up to 40 mol % of this polyamine can be replaced by a bis-primary amine, preferably ethylenediamine, or by a bis-secondary amine, preferably piperazine, and up to 20 mol % can be replaced by hexamethylenediamine. The crosslinking is carried out by means of a crosslinking agent (B) chosen from epihalogenohydrins, diepoxides, dianhydrides, unsaturated anhydrides and bis-unsaturated derivatives, and is characterised in that it is carried out using 0.025 to 0.35 mol of crosslinking agent per amine group of the polyamino - polyamide (A) and generally using 0.025 to about 0.2, and in particular 0.025 to about 0.1, mol of crosslinking agent per amine group of the polyamino - polyamide (A). These polymers and their preparation are described in greater detail in French Patent Application No. 2,252,840.

It is also possible to use, on the one hand, the polyaminoamides A, and, on the other hand, the water-soluble crosslinked polyaminoamides obtained by crosslinking a polyaminoamide A (described above) by means of a crosslinking agent chosen from:

(I) compounds chosen from

(1) bis - halogenohydrins, (2) bis - azetidinium compounds, (3) bis - halogenoacyl - diamines and (4) bis - (alkyl halides);

(II) the oligomers obtained by reacting a compound (a) chosen from the (1) bis - halogenohydrins, (2) bis - azetidinium compounds, (3) bis -

halogenoacyl - diamines, (4) bis - (alkyl halides), (5) epihalogenohydrins, (6) diepoxides and (7) bis - unsaturated derivatives, with a compound (b) which is a difunctional compound which is reactive towards the compound (a); and

(III) the quaternisation product of a compound

chosen from the compounds (a) and the oligomers (II) and containing one or more totally or partially alkylated tertiary amine groups, with an alkylating agent (c) preferably chosen from methyl or ethyl chlorides, bromides, iodides, sulphates, mesylates and tosylates, benzyl chloride or bromide, ethylene



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oxide, propylene oxide and glycidol, the crosslinking being carried out using 0.025 to 0.35 mol, in particular 0.025 to 0.2 mol and more particularly 0.025 to 0.1 mol, of crosslinking agent per amine group of the polyaminoamide.

These crosslinking agents and these polymers, and also the process for their preparation, are described in French Application No. 2,368,508;

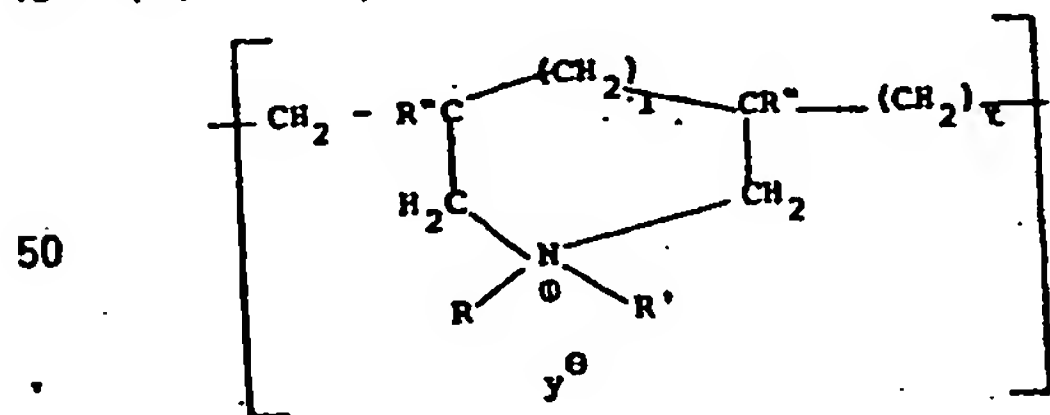
6. the water-soluble polyaminoamide derivatives resulting from the condensation of polyalkylene-polyamines with polycarboxylic acids, followed by alkylation by means of difunctional agents, such as the adipic acid/dialkylaminohydroxyl-dialylenetriamine copolymers in which the alkyl radical contains 1 to 4 carbon atoms and preferably denotes methyl, ethyl or propyl, which are described in French Patent 1,583,363.

Amongst these derivatives, there may be mentioned the adipic acid/dimethylaminohydroxypropyl-diethylene-triamine copolymers sold under the name Cartaretine F, F<sub>4</sub> or F<sub>6</sub> by SANDOZ;

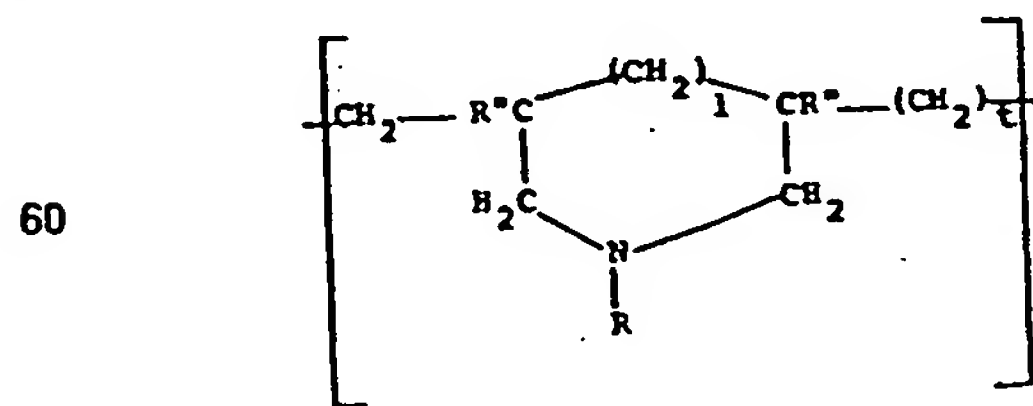
7. the polymers obtained by reacting a polyalkylene-polyamine containing two primary amine groups and at least one secondary amine group, with a dicarboxylic acid chosen from diglycolic acid and saturated aliphatic dicarboxylic acids having 3 to 8 carbon atoms, the molar ratio of the polyalkylene-polyamine to the dicarboxylic acid being 0.8:1 to 1.4:1, and the resulting polyamide being reacted with epichlorohydrin in a molar ratio of epichlorohydrin to the secondary amine groups of the polyamide of 0.5:1 to 1.8:1; these polymers are mentioned in U.S. Patents 3,227,615 and 2,961,347.

The polymers of this type are especially that sold under the name HERCOSETT 57 by Hercules Incorporated, which has a viscosity at 25°C of 30 cps in 10% strength aqueous solution, and that sold under the name PD 170 or DELSETTE 101 by Hercules, which is an adipic acid/epoxypropyl-diethylenetriamine copolymer.

8. water-soluble cyclic polymers having a molecular weight of 20,000 to 3,000,000, such as the homopolymers containing, as the main constituent of the chain, units corresponding to the formula (II) or (II'):



II



II'

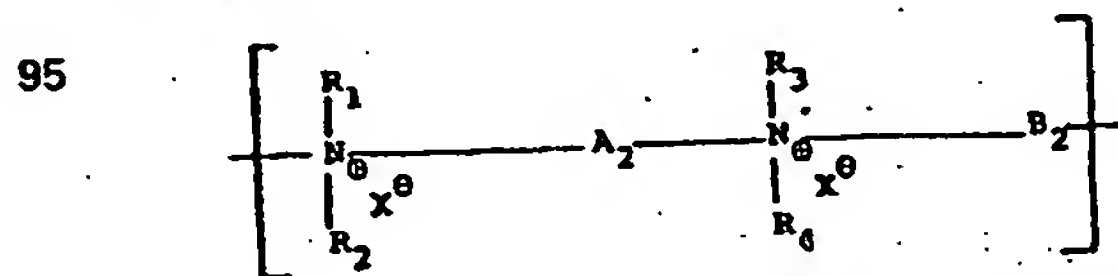
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in which  $l$  and  $t$  are equal to 0 or 1,  $t = 1$  if  $l = 0$  and 5 = 0 if  $l = 1$ ,  $R''$  denotes hydrogen or methyl,  $R$  and  $R'$  independently if one another denote an alkyl group having from 1 to 22 carbon atoms, a hydroxyalkyl group in which the alkyl group preferably has 1 to 5 carbon atoms, or a lower amidoalkyl group, or  $R$  and  $R'$  denote, together with the nitrogen atom to which they are attached, heterocyclic groups such as piperidinyll or morpholinyl, and  $y^{\ominus}$  is an anion, such as bromide, chloride, acetate, borate, citrate, tartrate, bisulphate, bisulphite, sulphate or phosphate, and also the copolymers containing units of the formula II or II' and, preferably, units derived from acrylamide or from diacetone-acrylamide.

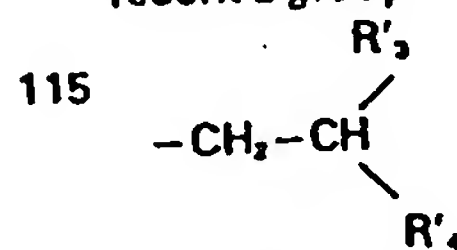
80 Amongst the quaternary ammonium polymers of the type defined above, there may be mentioned the dimethyl-diallylammonium chloride homopolymer sold under the name MERQUAT 100, which has a molecular weight of less than 100,000, and the dimethyldiallylammonium chloride/acrylamide copolymer having a molecular weight of more than 500,000, which is sold under the name MERQUAT 550 by MERCK.

These polymers are described in French Patent 2,080,759 and its Certificate of Addition No. 2,190,406.

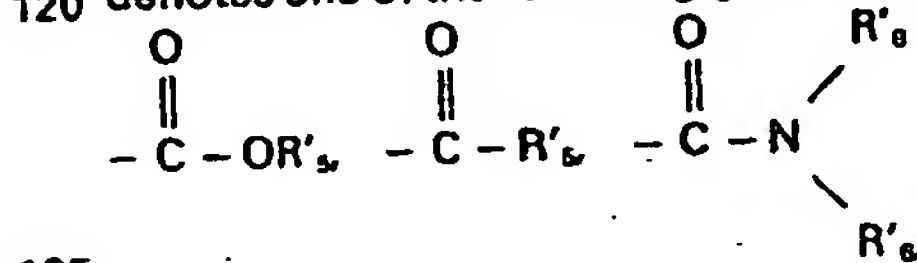
9. water-soluble poly-(quaternary ammonium) compounds containing repeat units of the formula:



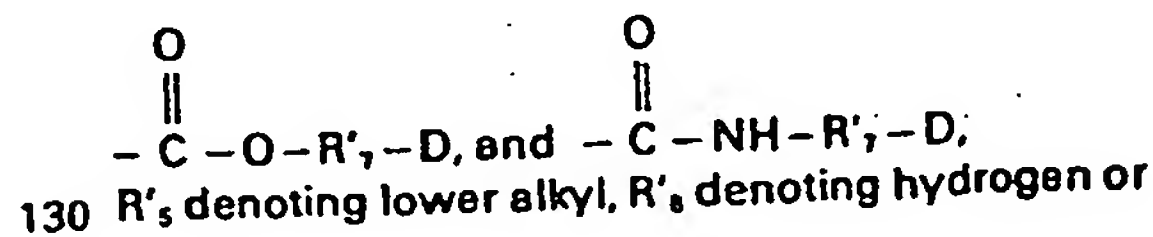
100 In which  $R_1$  and  $R_2$ , and  $R_3$  and  $R_4$ , which are identical or different, represent lower aliphatic or hydroxyaliphatic radicals having a maximum of 4 carbon atoms, it being possible however, for one of them to represent an aliphatic radical containing from 5 to 16 carbon atoms, an alicyclic radical or an arylaliphatic radical, provided that, in this case, the sum of the numbers of carbon atoms in the groups  $A_2$  and  $B_2$  is equal to at most 12, or alternatively  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  together or separately form, with the nitrogen atoms to which they are attached, heterocyclic rings optionally containing a second hetero-atom other than nitrogen, or alternatively  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  represent a group



In which  $R'_3$  denotes hydrogen or lower alkyl and  $R'_4$  denotes one of the following groups:  $\text{---CN}$ ,



125





these copolymers being described in French Patent 2,189,434.

The crosslinking agent is typically: ethylene glycol dimethacrylate, a diallyl phthalate, divinylbenzene, 5 tetraallyloxyethane or a polyallyl sucrose.

The cosmetic monomer can be of a very varied type, for example a vinyl ester of an acid having from 2 to 18 carbon atoms, an allyl or methallyl ester of an acid having from 2 to 18 carbon atoms, an acrylate or 10 methacrylate of a saturated alcohol having from 1 to 18 carbon atoms, an alkyl vinyl ether in which the alkyl radical has from 2 to 18 carbon atoms, an olefine having from 4 to 18 carbon atoms, a vinyl heterocyclic derivative, a dialkyl or N,N - dial- 15 kylaminoalkyl maleate in which the alkyl radicals have from 1 to 3 carbon atoms, or an anhydride of an unsaturated acid.

Other cationic polymers which can be used are, for example, polyalkylenelmines, in particular 20 polyethyleneimines, polymers containing vinylpyridine units or vinylpyridinium units in the chain, condensates of polyamines and epichlorohydrin, poly - (quaternary ureylene) compounds and chitin derivatives.

25 In the compositions of the invention, the proportion of the aqueous phase is preferably from 2 to 50% by volume, relative to the total volume of the composition.

The cationic polymer which is dissolved in the 30 aqueous phase is suitably present in the composition of the invention in an amount of 0.2 to 50% by weight, relative to the total weight of the composition.

Apart from the cationic polymer, the aqueous 35 phase can contain, in the dissolved state, especially, preservatives, thickeners, colorants and/or water-soluble solvents, such as alcohols (in particular ethanol). If they are present, these solvents suitably represent a maximum of 50% by volume, relative to 40 the total volume of the aqueous phase.

The oily phase can contain, especially, anti-oxidants, colorants and/or perfumes, in the dissolved state. The compositions of the present invention are usually free of detergents and foaming agents. 45 More generally, they are free of anionic and amphoteric surface-active agents; most frequently, the compositions of the present application are free of any surface-active agent. However, in certain cases, they can contain a small amount (less than 3% 50 by weight) of a cationic surface-active agent present as a cosmetic agent. In fact, it is known that cationic surface-active agents have a conditioning effect when deposited onto the hair or the skin.

This invention also relates to the application of the 55 two-phase composition described above, that is to say its use for treating and conditioning the hair, especially dry or sensitised hair, and for treating and conditioning the skin, in particular dry, wrinkled or rough skin or skin lacking in suppleness.

60 In the case of hair conditioning, the composition should be shaken in order to obtain a dispersion of the aqueous phase in the oily phase; typically from 5 to 40 cm<sup>3</sup> of the composition shaken in this way is applied to the head of hair and the composition is 65 left to act for at least five minutes and the hair is then

rinsed. If desired, the hair can then be washed with a shampoo, preferably with an anionic shampoo.

70 Preferably, the composition is left to act for at least five minutes. It is of course possible to leave the composition to act for several hours.

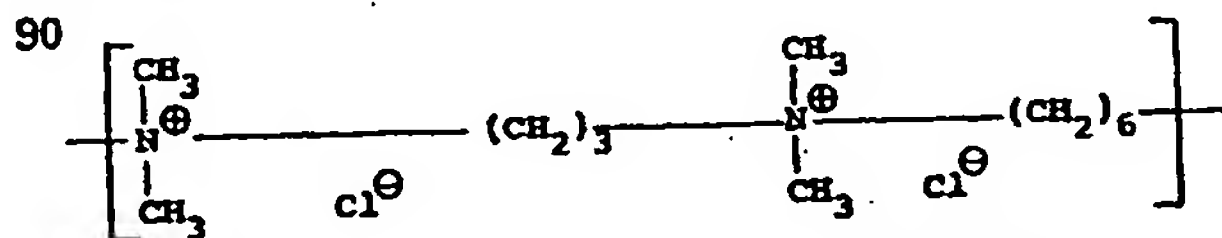
In general, this hair conditioning can be effected before or after a shampooing, colouring, bleaching, perming or straightening operation.

75 In the case of skin conditioning, the composition should again be shaken in order to obtain a dispersion of the aqueous phase in the oily phase, and the composition shaken in this way spread over the skin, the latter being massaged if desired. Any excess composition can be removed with an absorbent wad 80 (of fabric, cottonwool or paper), but, in contrast to the case of the hair, the composition need not be rinsed off. Preferably, the composition is applied to skin which has been cleaned beforehand.

The following Examples further illustrate the pres- 85 ent invention.

In these Examples, the meanings of the symbols denoting the cationic polymers are as follows:

*Polymer P<sub>1</sub>*: polymer consisting of units of the formula:



95 which can be prepared as described in French Patents 2,270,846 and 2,333,012.

*JR 400*: hydroxyethylcellulose/epichlorohydrin polymer quaternised with trimethylamine, having a viscosity of 400 cps and sold by Union Carbide.

100 *Merquat 100*: dimethyldiallylammonium chloride homopolymer having a molecular weight of less than 100,000 and sold by Merck & Co.

*CARTARETINE F.4*: adipic acid/dimethylamino-hydroxypropyl - diethylenetriamine copolymer sold 105 by Sandoz.

*Polymer P<sub>2</sub>*: polycondensate of equimolecular amounts of adipic acid and diethylenetriamine, crosslinked with epichlorohydrin (11 mols of epichlorohydrin per 100 amino groups) and described in French Patent 110 2,252,840.

*Example 1*: The oily and aqueous phases having the following compositions are prepared:

*Oily phase*

maize oil: 20 cc

115 antioxidant q.s.\*

perfume q.s.

colorant q.s.

sunflower seed oil q.s.p.: 100 cc

\* q.s. means: sufficient quantity.

120 *Aqueous phase*

polymer P<sub>1</sub>: 5 g (a.i. \*)

preservative q.s.

colorant q.s.

water q.s.p.: 100 cc

125 \* a.i. means: active ingredient.

The two-phase composition is obtained by bringing together 2 cm<sup>3</sup> of the aqueous phase and 18 cm<sup>3</sup> of the oily phase.

After shaking, the composition is applied to dry or 130 sensitised hair. After an interval of 5 minutes to 4



hours, but preferably after 15 minutes, the hair is rinsed and then shampooed.

The hair is easy to comb out when wet. The hair is soft, bulky and glossy when dry.

- 5 Comparable results are obtained by using the following compositions:

*Example 2:* 16 cc of oily phase and 4 cc of aqueous phase are mixed, the phases having the following compositions:

10 *Oily phase*

avocado oil: 10 cc  
antioxidant q.w  
perfume q.s  
colorant q.s

15 rapeseed oil q.s.p: 100 cc

*Aqueous phase*

polymer P<sub>1</sub>: 1.5 g (a.i.)  
JR 400: 1 g (a.l.)  
preservative q.s

20 colorant q.s

water q.s.p: 100 cc

*Example 3:* 18 cc of oily phase and 2 cc of aqueous phase are mixed, the phases having the following compositions:

25 *Oily phase*

castor oil: 5 cc  
antioxidant q.s  
perfume q.s  
colorant q.s

30 soya oil q.s.p: 100 cc

*Aqueous phase*

Merquat 100: 3 g (a.i.)  
Cartaretine F<sub>4</sub>: 5 g (a.i.)  
preservative q.s

35 colorant q.s

water q.s.p: 100 cc

*Example 4:* 16 cc of oily phase and 4 cc of aqueous phase are mixed, the phases having the following compositions:

40 *Oily phase*

identical to that of Example 3

*Aqueous phase*

polymer P<sub>1</sub>: 1.5 g (a.i.)  
polymer P<sub>2</sub>: 3.5 g (a.i.)

45 ethyl alcohol q.s.p: 50° strength

preservative q.s

colorant q.s

water q.s.p: 100 cc

*Example 5:* 16 cc of oily phase and 4 cc of aqueous phase are mixed, the phases having the following compositions:

*Oily phase*

linseed oil: 1 cc  
antioxidant q.s

55 perfume q.s

colorant q.s

sweet-almond oil q.s.p: 100 cc

*Aqueous phase*

polymer P<sub>1</sub>: 1.5 g (a.i.)

60 polymer P<sub>2</sub>: 3.5 g (a.i.)

preservative q.s

colorant q.s

water q.s.p: 100 cc

*Example 6:* 10 cc of oily phase and 10 cc of aqueous phase are mixed, the phases having the following

compositions:

*Oily phase*

jojoba oil: 20 cc

antioxidant q.s

perfume q.s

colorant q.s

sesame oil q.s.p: 100 cc

*Aqueous phase*

identical to that of Example 3

- 75 *Example 7:* 10 cc of oily phase and 10 cc of aqueous phase are mixed, the phases having the following compositions:

*Oily phase*

peach stone oil: 10 cc

80 vaseline oil: 30 cc

preservative q.s

perfume q.s

colorant q.s

olive oil q.s.p: 100 cc

85 *Aqueous phase*

identical to that of Example 1

*Example 8:* 18 cc of oily phase and 2 cc of aqueous phase are mixed, the phases having the following compositions:

90 *Oily phase*

identical to that of Example 7

*Aqueous phase*

Merquat 100: 3 g (a.i.)

Cartaretine F<sub>4</sub>: 5 g (a.i.)

95 ethyl alcohol q.s.p: 25° strength

preservative q.s

colorant q.s

water q.s.p: 100 cc

*Example 9:* 16 cc of oily phase and 4 cc of aqueous phase are mixed, the phases having the following compositions:

*Oily phase*

horse grease: 25 cc

antioxidant q.s

105 perfume q.s

colorant q.s

wheatgerm oil q.s.p: 100 cc

*Aqueous phase*

identical to that of Example 5

- 110 *Example 10:* 19.5 cc of oily phase and 0.5 cc of aqueous phase are mixed, the phases having the following compositions:

*Oily phase*

identical to that of Example 2

115 *Aqueous phase*

polymer P<sub>1</sub>: 60 g (a.i.)

preservative q.s

colorant q.s

water q.s.p: 100 cc

- 120 *Example 11:* 10 cc of oily phase and 10 cc of aqueous phase are mixed, the phases having the following compositions:

*Oily phase*

identical to that of Example 3

125 *Aqueous phase*

Merquat 100: 0.3 g (a.i.)

Cartaretine F<sub>4</sub>: 0.3 g (a.i.)

preservative q.s

colorant q.s

130 water q.s.p: 100 cc

*Example 12:* 16 cc of oily phase and 4 cc of aqueous phase are mixed, the phases having the following compositions:

*Oily phase*

- 5 antioxidant q.s
- perfume q.s
- colorant q.s
- jojoba oil q.s.p 100 cc

*Aqueous phase*

- 10 Merquat 100: 2 g (a.i.)
- preservative q.s
- colorant q.s
- water q.s.p: 100 cc

- After shaking, the composition is applied to the
- 15 skin. It imparts suppleness and softness thereto. Similar results are obtained by applying the composition of Example 2 to the skin.

**CLAIMS**

- 1. A composition suitable for application to the
- 20 skin or the hair, which comprises two separate liquid phases, the first phase being an oily phase and the second phase being an aqueous phase having dissolved therein, at least one cationic polymer.
- 2. A composition according to claim 1, in which
- 25 the oily phase contains from 25% to 100% by volume of vegetable oil, relative to the total volume of the oily phase, any remainder consisting of one or more animal, synthetic and/or mineral oils.
- 3. A composition according to claim 1 or 2, in
- 30 which the oily phase also contains at least one dissolved antioxidant, colorant or perfume.
- 4. A composition according to any one of the preceding claims, in which the oily phase is free of silicones.
- 35 5. A composition according to any one of the preceding claims, in which the cationic polymer is a polymer of the polyamine, polyaminoamide or poly-(quaternary ammonium) type, the amine or ammonium groups forming part of the polymer
- 40 chain or being attached to the latter.
- 6. A composition according to any one of the preceding claims, in which the proportion of the aqueous phase is from 2 to 50% by volume, relative to the total volume of the composition.
- 45 7. A composition according to any one of the preceding claims, in which the cationic polymer is present in the composition in an amount of 0.2 to 50% by weight, relative to the total weight of the composition.
- 50 8. A composition according to any one of the preceding claims, in which the aqueous phase also contains at least one of a preservative, a thickener, a colorant and a water-soluble solvent.
- 9. A composition according to claim 7, in which
- 55 the said water-soluble solvent is an alcohol.
- 10. A composition according to any one of the preceding claims which is free of detergent.
- 11. A composition according to claim 1 substantially as described in any one of the Examples.
- 60 12. A method of conditioning the hair or the skin which comprises applying thereto a composition as claimed in any one of the preceding claims.
- 13. A method according to claim 12, in which the composition is shaken in order to obtain a dispersion
- 65 of the aqueous phase in the oily phase, from 5 to 40

cm<sup>3</sup> of the shaken composition are applied to the head of hair, the composition is left to act for at least 5 minutes and the hair is then rinsed.

- 14. A method according to claim 13, in which the
- 70 hair is then washed with a shampoo.

- 15. A method according to claim 12, in which the composition is shaken in order to obtain a dispersion of the aqueous phase in the oily phase, the shaken composition is spread over the skin, the latter optionally being massaged.

- 75 16. A method according to claim 12 substantially as hereinbefore described.

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